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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,298	03/25/2004	Tetsuya Kurosawa	02887.0271	5493

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EXAMINER
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OSELE, MARK A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/808,298

Applicant(s)

KUROSAWA

Examiner

Mark A. Osele

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-19 and 21-25 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-14 and 20 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03252004, 02242005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 6, 10-14, 20 rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al. Watanabe et al. shows a method and apparatus for peeling a pressure sensitive adhesive tape from a semiconductor wafer constituted by a plurality of semiconductor chips wherein the apparatus comprises a peeling mechanism with a sucking section having a porous member to hold the semiconductor wafer by suction, the porous member being segmented into a plurality of sucking areas in the direction in which the tape is peeled wherein the vacuum in each of the sections can be turned on and off (column 8, lines 25-36). After peeling of the tape the chips are lifted with a vacuum collet (column 6, lines 13-18).

Regarding claim 20, the claimed method does not require that the adhesive on the tape and the wafer are two separate adhesives.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. As shown in paragraph 2 above, Watanabe et al. shows the instantly claimed invention except for the cutting mechanism for the adhesive tape. Watanabe et al. shows that in one embodiment the adhesive tape can be cut (Fig. 11; column 9, lines 31-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a cutter to the apparatus of Watanabe et al.

5. Claims 3, 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. in view of Miyamoto et al. As shown in paragraph 2 above, Watanabe et al. shows the instantly claimed invention except for the heater in the apparatus. Miyamoto et al. teaches that wafer adhesive tapes can have their adhesive strength weakened by heat (column 16, lines 30-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a heater to the apparatus of Watanabe et al. so it can reduce the strength of the adhesive tape and make peeling of the tape easier.

***Allowable Subject Matter***

6. Claims 15-19 and 21-25 are allowed.

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7. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art suggests an adhesive layer on the wafer opposite the adhesive sheet nor cutting the wafer after peeling of the tape. The tape of Watanabe et al. is a dicing tape used to hold the wafer in position after dicing. In addition, none of the prior art suggests using a laser to be applied to the semiconductor chip with an incidence angle of 20° and 40°.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yamasaki and Choi show vacuum holding members with a plurality of vacuum sections.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Osele whose telephone number is 571-272-1235. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on 571-272-1187. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Mark A. Osele', is positioned above the printed name and title.

**MARK A. OSELE**  
**PRIMARY EXAMINER**

June 27, 2005